

TAB 2



Espacenet

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System of texture mapping and method thereof

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A texture mapping system and a texture mapping method are provided for generating pixels displayed on a screen by texture mapping. The texture mapping system includes a texture cache for storing texture image data fetched from a frame buffer memory with respect to one scanline, in which the texture cache comprises a column structure composed of a tag region where an image coordinate value (u, v) of the texture image data is stored, a refill line region where the texture image data corresponding to the image coordinate value of the tag region is stored, and an effective bit region indicating whether data of the refill line region is accessed. The texture cache also has a row structure in which the number of rows is the same as the number texture image patch data with respect to an image of a maximum length covering at least one scanline to be texture mapped, to store texture image patch data to be texture mapped. Accordingly, by the texture mapping system including a texture cache and a data loading method of the texture cache, texture memory capacitance of the graphic process chip is reduced to reduce chip cost. Further, data access speed is reduced due to cache hit to rapidly perform texture-mapping.

TEXTURE IMAGE PATCH	SECOND-LEVEL B-BOX	TAG	REFILL LINE
TEXTURE IMAGE PATCH	SECOND-LEVEL B-BOX	TAG	REFILL LINE
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